

Title (en)  
Seat belt device

Title (de)  
Sicherheitsgurtvorrichtung

Title (fr)  
Dispositif de ceinture de sécurité

Publication  
**EP 1243487 A3 20040218 (EN)**

Application  
**EP 02006403 A 20020321**

Priority  
JP 2001083131 A 20010322

Abstract (en)  
[origin: EP1243487A2] A seat belt device has a gas generator (11) for generating a high pressure gas when the vehicle is in emergency, a cylinder (17) for conducting the high pressure gas from the gas generator, a piston (20) received movably within the cylinder and pressed and moved by the high pressure gas, and a drive unit for rotating a winding shaft (4) of a seat belt retractor in a direction of removing the slack of a belt, using the movement of the piston, wherein the pretensioner is employed with an energy absorbing mechanism, for reversely rotating the winding shaft if a tension acting on the belt exceeds a predetermined value after removing the slack of the belt. For facilitating this reverse rotation, a venting mechanism (22a) having a gas passageway for exhausting the high pressure gas from a space filled with the high pressure gas to the outside of the space is provided, wherein at least a part of the gas passageway is expanded as the high pressure gas is exhausted. <IMAGE>

IPC 1-7  
**B60R 22/46**

IPC 8 full level  
**B60R 21/26** (2011.01); **B60R 22/46** (2006.01)

CPC (source: EP US)  
**B60R 22/4633** (2013.01 - EP US); **B60R 2022/4661** (2013.01 - EP US)

Citation (search report)  
• [XA] EP 0980799 A2 20000223 - BREED AUTOMOTIVE TECH [US]  
• [X] PATENT ABSTRACTS OF JAPAN vol. 2000, no. 14 5 March 2001 (2001-03-05)  
• [Y] PATENT ABSTRACTS OF JAPAN vol. 1998, no. 08 30 June 1998 (1998-06-30) & US 6343758 B1 20020205 - ABE MINORU [JP], et al

Cited by  
DE10212912B4; EP1679239A1; CN100422001C; DE102004002428B4; US7624940B2; US7571873B2

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)  
**EP 1243487 A2 20020925; EP 1243487 A3 20040218; EP 1243487 B1 20060125**; AT E316481 T1 20060215; DE 60208831 D1 20060413; DE 60208831 T2 20060810; JP 2002274325 A 20020925; JP 4651841 B2 20110316; US 2002134876 A1 20020926; US 7500632 B2 20090310

DOCDB simple family (application)  
**EP 02006403 A 20020321**; AT 02006403 T 20020321; DE 60208831 T 20020321; JP 2001083131 A 20010322; US 10001502 A 20020319